

POLICY FRAMING PAPER

Can Africa learn from the Chinese urbanisation story?

Stefan Dercon

University of Oxford

Director, Centre for the Study of
African Economies

Sebastian Kriticos

International Growth Centre

Economist, Cities that Work
Initiative

Astrid Haas

International Growth Centre

Head of Cities that Work Initiative

Nicolas Lippolis

University of Oxford

Policy Officer, Centre for the Study
of African Economies

DIRECTED BY



FUNDED BY



IN PARTNERSHIP WITH:



CONTENTS

Executive summary	3
--------------------------	----------

The co-evolution of urbanisation and job creation	6
--	----------

Some of the policies underpinning successful cities	8
Making the most of urban land	8
The critical role of infrastructure and public services	23
Improving urban governance and municipal finance	26
Facilitating firm growth and investment	33

Conclusion	38
-------------------	-----------

LIST OF CASE STUDIES

Case Study 1: The complex overlapping land tenure systems of Uganda	12
---	----

Case Study 2: Rwanda's quick and cost-effective approach to parcel identification	13
---	----

Case Study 3: Urban redevelopment in Shanghai	14
---	----

Case Study 4: The consequences of poor planning in Nairobi	17
--	----

Case Study 5: Making room for urban expansion in Ethiopia	19
---	----

Case Study 6: Addis Ababa's Integrated Housing and Development Plan	22
---	----

Case Study 7: Land policy experimentation in Shenzhen	28
---	----

Case Study 8: Urban Policy and Hawassa Industrial Park, Ethiopia	38
--	----

Executive summary

In the next thirty years, Africa's cities need to make room for 900 million more citizens – roughly tripling the current urban population.¹ This offers new opportunities for growth and prosperity, as well as significant challenges for public policy. At their best, cities are engines for economic development and rising living standards, but at their worst, they become sites of congestion, overcrowding and discontent.

China is the only place in the world that has experienced a similarly monumental urban transition to the one currently being faced in Africa. Between 1978 and 2010, China's urban areas took on approximately 700 million additional people.² It was in the cities where productivity growth drove the country's thirty-year economic miracle.³

A major difference is that Africa's current urbanisation has not been associated with anywhere near the same gains in productivity and poverty reduction that have been seen in China. Instead, the growth of Africa's cities has more often been associated with development challenges such as the rise of slums, unemployment, and political instability. With well-implemented and far-sighted public policy, this trend could be reversed and urbanisation could unlock a process of sustained and inclusive development in Africa.

This paper provides a framework to understand the similarities and differences between Africa's current urbanisation pathway and the path China has taken over the last 30 years.

We illuminate several areas for research that could be important for African policymakers to explore further, both to learn from China's successes, as well as to avoid some of the challenges that are now being realised. This paper focus on the importance of sound policies around land use, infrastructure investment, urban governance, and industrialisation. In doing so, we highlight the unexploited potential of African cities.

¹ Muggah, Robert. and Hill, Katie. "African cities will double in population by 2050. Here are 4 ways to make sure they thrive." World Economic Forum online. <https://www.weforum.org/agenda/2018/06/Africa-urbanisation-cities-double-population-2050-4%20ways-thrive/> (retrieved May 15, 2019).

² Fuzhan, Xie. Kuangdi, Xu. Fang, Cai. and Wu Zhiqiang. "On the road to quality urbanisation". Telegraph online. <https://www.telegraph.co.uk/china-watch/business/urbanisation-in-china/> (retrieved May 15, 2019)

³ Yang, Li. "China's Growth Miracle: Past, Present, and Future." *United Nation Research Institute for Social Development* 7 (2013).

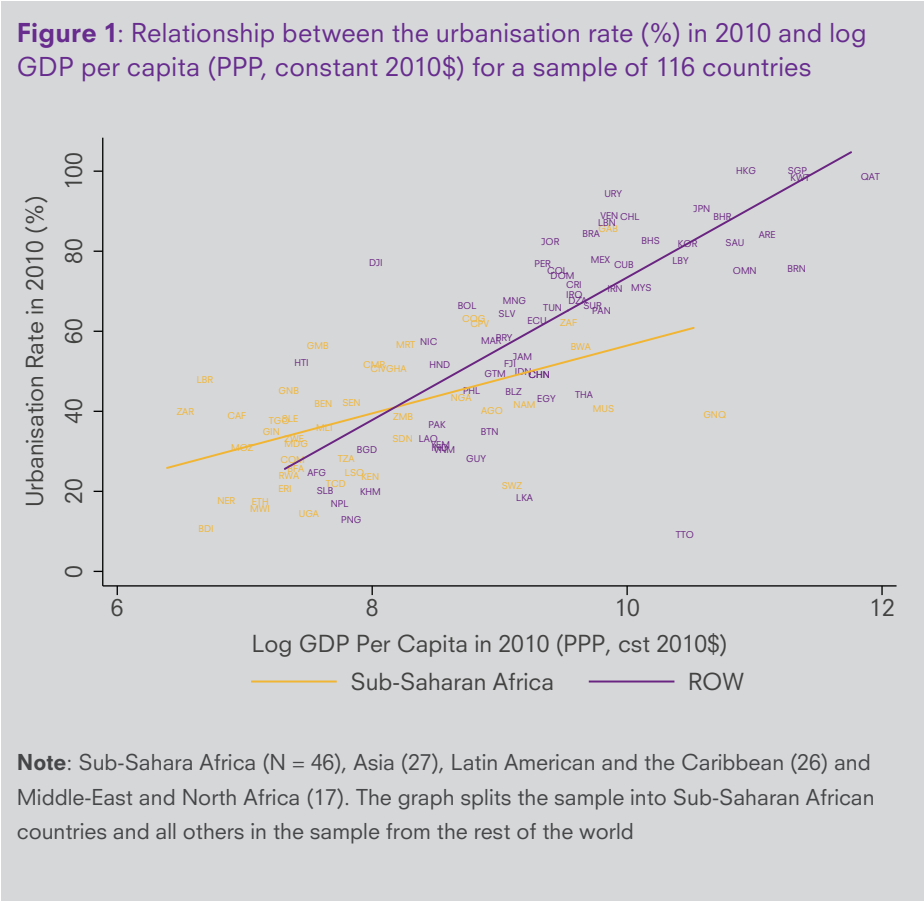
No country has developed without undergoing urban transition. It is often remarked as the necessary, albeit insufficient, condition for development. When urbanisation is successful, cities offer a platform for people and businesses to come together and generate new innovations that underpin economic growth. The density of cities also offers the prospect of improved liveability, as it is much cheaper and more efficient to provide people with public services and infrastructure when they are clustered together in close proximity.

However, productive and liveable cities do not arise automatically. Without active public policy, a growing city will soon see the downsides of density, often epitomised by issues like gridlock traffic and mega-slums. These issues not only undermine liveability, but they constrain productive potential if firms become unwilling to invest and generate the jobs and incomes that ultimately fuel long term development.

Figure 1 demonstrates these ideas by depicting the relationship between the urbanisation rate in 2010 and income per capita across countries. Globally, there is a clear positive relationship between the two measures: higher urbanisation rates are associated with rising incomes across all countries. However, there is also a notable distinction among several African countries compared to what has been seen in China and other places: many African countries are reaching high rates of urbanisation without achieving similar gains in income.

Successful cities offer a platform for people and businesses to come together and generate new innovations that underpin economic growth.

Without active public policy, a growing city will soon see the downsides of density such as gridlock traffic and slum housing.



A major reason for these diverging performances, is that urbanisation in Africa has so far not gone hand-in-hand with large-scale and productive job creation. This was the bedrock of China's growth: when people moved to cities, there were employment opportunities that allowed surplus labour from agriculture to be shifted into higher-value industries. By contrast, Africa is urbanising without significant industrialisation. Migrants are moving towards cities, not as a result of rising urban productivity, but rather to break away from rural poverty.⁴

When people moved to Chinese cities, there were employment opportunities that allowed surplus agricultural labour to be shifted into higher-value industries.

A key question for African policymakers is why African cities have not succeeded in generating rising incomes and what can be done about it. In this paper, we choose four areas that provide interesting comparisons with the Chinese experience, namely:

- 1 Clear systems for land ownership and proactive planning to ensure the efficient and intensive development of urban land;
- 2 Pro-active investment in infrastructure and services to meet the needs of citizens and to mitigate issues such as congestion, crime and contagious disease;
- 3 Empowering local governments to raise finances and to pursue large-scale, targeted investments needed to improve liveability;
- 4 Ensuring physical connectivity and an overall enabling environment for firm growth and investment.

Differing approaches in these four areas between Chinese and many African cities will be further explored in this paper. However, it should be noted from the outset that the scale of change in China is not only wholly unprecedented for one single country, but the contextual differences in terms of economic, geographic, historical and institutional make-up are vast. In many cases, it may be unfeasible and undesirable for any African country to emulate the policies that guided urbanisation in China. No single approach would ever be suitable for a continent as diverse as Africa anyway, so with that in mind, this paper makes no attempt to be exhaustive. Our focus is on the forward-looking challenges African cities will face, and where the choices taken by China could be deemed informative for those looking to define their own models for urban growth.

The rest of this paper discusses how certain urban policies can effectively contribute to the creation of more jobs and better living conditions. In the next sections, we first provide a brief overview of how cities can be engines of job creation and productivity growth. We then cover key areas to ensure cities are both liveable and productive – namely, land use and urban planning, infrastructure and services, urban governance, and firm growth.

⁴ Collier, Paul. "African Urbanisation: An Analytical Policy Guide." *Policy paper*, International Growth Centre, London (2016).

The co-evolution of urbanisation and job creation

People are typically drawn to cities for the prospect of a larger number of available as well as more diverse job opportunities. At the same time, firms choose to locate in cities because they stand to gain from close access to markets, as well as learning from neighbouring businesses.⁵ These productivity benefits are often termed agglomeration economies and they are reflected by urban-rural income differences – another draw to city life.⁶ The process of economic development is hence intrinsically linked to rural-urban migration, as individuals move away from rural agriculture and towards higher-value jobs in cities.⁷

This is clearly reflected in the development experience of China, where urbanisation and rapid economic modernisation went hand-in-hand. Forty years ago, roughly 80 percent of the population was employed in rural agriculture;⁸ whereas today, nearly 60 percent of Chinese people live and work in urban areas. China has become the home of several of the largest and world-leading cities. This growth of cities was bolstered by massive industrialisation and economic growth: between 1978-2009, China's aggregate GDP grew around 10% annually,⁹ effectively doubling national income every seven years.¹⁰

Market-based reforms provided the initial impetus for China's demographic shift towards cities: increasing productivity in agriculture created surplus workers and allowed huge portions of the agricultural labour force to move

Economic development is intrinsically linked to rural-urban migration.

Forty years ago, 80 percent of the Chinese population was employed in rural agriculture. Today, nearly 60 percent of Chinese people live and work in cities.

⁵ Combes, Pierre-Philippe, and Laurent Gobillon. "The empirics of agglomeration economies." In *Handbook of regional and urban economics*, vol. 5, pp. 247-348. Elsevier, 2015.

⁶ D'Costa, Sabine, and Henry G. Overman. "The urban wage growth premium: Sorting or learning?". *Regional Science and Urban Economics* 48 (2014): 168-179.

⁷ Rosenstein-Rodan, Paul N. "Problems of industrialisation of eastern and south-eastern Europe." *The economic journal* 53, no. 210/211 (1943): 202-211. Nurkse, Ragnar. *Problems of capital formation in underdeveloped countries*. Oxford University Press, 1953. Lewis, W. Arthur. "Economic development with unlimited supplies of labour." *The manchester school* 22, no. 2 (1954): 139-191. Rostow, Walt Whitman. *The process of economic growth*. No. HBI99 R65 1960. 1960.

⁸ U.N Habitat. "The state of African cities." *Nairobi: The United Nations Settlements Programme* (2010): 1-44.

⁹ Hu, Angang. *China in 2020: A new type of superpower*. Brookings Institution Press, 2011.

¹⁰ Liu, Zheng. "Is China's growth miracle over?" *FRBSF Economic Letter* 26, no. 10 (2015).

out of farming.¹¹ At the same time, the state gave increasing support to privatisation, shifting away from centrally planned resource allocation and allowing the gradual liberalisation of economic markets and growth of the non-state sector.¹² These reforms gave rise to China's progressive industrialization and urbanisation process. In the initial early stages, the government focused on the development of townships, and within just six years after 'reform and opening up', almost 50 million workers had relocated out of agriculture in favour of industrial areas in townships and villages.¹³

Later reforms attached greater importance to cities and the development of urban clusters and metropolitan circles. Reforms during this stage included those in the urban sector, further discussed in this paper, as well as the overall opening up of trade. These reforms encouraged workers from the rural and Township and Village Enterprise economies to move towards increasingly competitive cities. Importantly, these cities had the necessary mix of supportive infrastructure and institutions to encourage firms to grow and generate decent jobs that could absorb the large-scale transfer of the surplus rural labour force. The number of migrant workers increased rapidly during this period as China adopted a pro-urban industrial strategy that could take advantage of low-cost surplus labour. In just three decades, nearly 300 million rural migrants moved to Chinese cities. By 2007, private enterprises accounted for 51 percent of urban employment in China's manufacturing sector and the country was positioned as a global leader in international trade.¹⁴ Today, the three largest cities in China occupy only 5% of land but are responsible for 40% of GDP.¹⁵

The three largest cities in China occupy only 5% of land but are responsible for 40% of GDP.

One thing Africa clearly has in common with post-1978 China, is that vast numbers of people are moving out of rural agriculture and towards cities. Some of the migration from rural areas to cities can be explained by the need to

¹¹ Under the collective farming system in China, large communes would work together and sell their outputs to the state. Decollectivization happened through the transfer to the household responsibility system in which households could directly sell their produce in the open market, after they had met a certain quota to be sold to the state. This shift to a more market-based system meant that agricultural prices began to rise, which in turn offered higher returns to investing in agricultural technologies. As a result, between 1978-2007, agricultural total factor productivity (TFP) grew on average by 4.01% per annum. See: Zhu, Xiaodong. "Understanding China's growth: Past, present, and future." *Journal of Economic Perspectives* 26, no. 4 (2012): 103-24.

¹² Before 1978, China's industrial production was largely governed by centrally planned resource allocation; the private industrial sector consisted of just a few collective firms that were confined to producing only a small number of consumer goods and neighbourhood services. However, with the reforms which included the introduction of the dual-track pricing system, State-Owned Enterprises were allowed to buy and sell surplus goods at market prices, after first meeting a certain quota of transactions at official government prices. Furthermore, non-SOEs were allowed to enter industries that were previously closed off to them.

¹³ Ibid.

¹⁴ Ibid.

¹⁵ Yeh, A. 2019 "From Mega-Cities to Mega-City Regions in China in a New Wave of Urbanisation and Economic Transition: Issues and Challenges." Presentation at the International Conference on China Urban Development: Paradigm Shift to Quality Urbanisation. Beijing

escape volatile and very poor rural environments.¹⁶ Other explanations include the fact that within Africa, the more urbanised countries tend to be those with large endowments of natural resources. It is argued that this occurs because resource income spending raises demand for urban goods and services, some of which can be imported and some of which can only be provided locally. This spending, therefore, drives a movement towards so-called ‘*consumption cities*’ where employment is local in scope rather highly productive and internationally competitive.¹⁷

However, as already noted, unlike China, Africa has been urbanising without major increases in agricultural or industrial productivity. Therefore, a crucial policy question to compare with the Chinese experience, is what people do when they get to cities: what kind of jobs do they have access to, and to what extent do these jobs support decent livelihoods and further economic growth. Recent work suggests that African cities have a much greater prevalence of primary employment, such as in agricultural services, than in other regions across the world and a much diminished role for manufacturing and service industries.¹⁸ This is true even amongst the largest urban areas, which generally tend to specialise in highly valued industries – such as finance and insurance – as manufacturing moves to smaller cities in response to rising urban land values.¹⁹

The important policy question is what people do when they get to African cities: what kind of jobs can they access and to what extent do they support better livelihoods?

Some of the policies underpinning successful cities

Making the most of urban land

Many African cities are characterized by urban sprawl, rather than densification. Affordable housing near the central city is generally lacking, so the market response is for households to either crowd together in slum-like conditions to be near jobs in the centre, or to be side-lined to the outskirts of cities where it is easier and more affordable to build. These issues will only be exacerbated with future population pressures. As a result, many of these cities are spatially dispersed and, without commensurate investments in transport, they lack connectivity, meaning they leave citizens isolated from social and economic life.

¹⁶ Jedwab, R., Christiaensen, L. and Gindelsky, M., 2015. *Demography, urbanization and development: Rural push, urban pull and... urban push?* The World Bank.

¹⁷ Gollin, Douglas, Remi Jedwab, and Dietrich Vollrath. "Urbanisation with and without industrialization." *Journal of Economic Growth* 21, no. 1 (2016): 35-70.

¹⁸ Henderson, J. Vernon, and Sebastian Kriticos. "The development of the african system of cities." *Annual Review of Economics* 10 (2018): 287-314.

¹⁹ Ibid.

According to recent research on 265 cities across 70 different countries, the average African city is 20% more fragmented than cities in Asia, 29% more expensive, and with 37% less exposure to people and jobs.²⁰ Low exposure means that people are less able to connect and interact with other citizens, while fragmentation means that within a specified area, population density varies widely and inconsistently, limiting the potential productivity gains of clustering. The combination of low exposure and high fragmentation increases infrastructure and travel costs, limiting the productive potential of cities, businesses and individuals to grow.²¹

The average African city is 20% more fragmented than cities in Asia, 29% more expensive, and with 37% less exposure to people and jobs.

To meet future demands for urban growth, policy will need to encourage the intensive and efficient development of land. There are three key areas for public policy to support unleashing the full potential of urban land:

- 1 Clarifying ownership.** Clear and well-administered land ownership is critical for the efficient functioning of real estate markets - allowing land to be bought, sold, developed, and coordinated according to the needs of urban growth.
- 2 Realistic and proactive urban planning.** With effective planning, land is more likely to be developed in an orderly manner. This helps to coordinate expectations and influence the direction of future investments. It also helps to ensure that sufficient land can be reserved for essential infrastructures, such as roads, sewerage and safe water. Evidence has shown that trying to retrofit this infrastructure after people have settled can be up to three times more expensive.²²
- 3 Enabling land and building use regulations.** Restrictions on land use and building heights are sometimes necessary to ensure adherence to standards and the development of quality of infrastructure. However, when they are unrealistic and unenforceable, the restrictions can impair both liveability and productivity, hence incentivising increased informality, for example, in the form of slums.

In each of these cases, it is instructive to further examine the Chinese experience to understand how these policy areas were tackled.

Clarifying ownership over land

By 1978, almost all of China's land, both urban and rural, was either owned by the state or by collectives. Private property rights were virtually non-existent and land transactions were prohibited. In recognition that land is a fundamental cornerstone to unleashing the potential of cities, the government has since undertaken gradual but significant reforms to land ownership.

²⁰ Lall, Somik Vinay, J. Vernon Henderson, and Anthony J. Venables. *Africa's cities: Opening doors to the world*. The World Bank, 2017.

²¹ Ibid.

²² Fernandes, Edesio. *Regularization of informal settlements in Latin America*. Cambridge, MA: Lincoln Institute of Land Policy, 2011.

One of the early and influential reforms was the amendment of the 1988 Constitution. The amendment split ownership and use-rights, by officially adopting land-leasing as the basis for assigning use rights to urban dwellers. This meant that the government continued to own the land, but the use rights could be bought for a specified period of time (typically between 40-70 years), through two types of public auction mechanisms, and then these rights could further be transacted in accordance with the law.²³ The same system is still in effect today and it has been transformative to China's urbanisation process.

The land-leasing system adopted in 1988 has been transformational to China's urbanisation process and it is still in effect today.

There are other administrative laws which grant the local government powers over land use and expropriation. For instance, the 1998 Land Administration Law provides situations under which land use rights may be withdrawn for cases of public interest, although it should be noted that public interest is broadly interpreted, and it is commonplace for land to be withdrawn either to raise public revenue or to transfer property to private third-parties. If the right holder is entitled to compensation it is typically provided solely towards the structure sitting on the land, however, it may also include livelihood compensation if the structure or land is used for income-generating activities such as shops or farmland. Compensation is typically made either in cash (based on market prices) or in kind (in the form of a replacement structure), and accounts for any moving expenses or resettlement subsidies.

Several important advantages for urban management have arisen from China's land reforms since 1978: although the system still does not provide full private property rights, there has been progress to improve security beyond the pre-1978 system. Furthermore, having overarching state ownership of land has also meant that social and political conflicts have been reduced. In particular, it is clear that the government has the final claim to urban land and the principal way of recognising, recording and proving any other occupants over land was on the official government register. At the same time, however, land has increasingly been opened to market mechanisms that have enabled its dynamic and productive transfer. Lastly, the government has retained legal authority to enforce powers over land to ensure it is used for the public interest.

Despite its advantages, China's land system has also created many challenges related to the complexity of its administration. As land allocation and user fees are determined through an administrative, rather than competitive market process, land can be liable to be misused or unfairly priced. For instance, state-owned enterprises have often been accused of subverting local government authority thanks to their direct connections with central ministries.²⁴ It has also been argued that self-interested political groups often look to make short-term gains from unfair land acquisition and transfer. This has contributed to an urbanisation model that heavily relies on the government's ability to expropriate lands.

China's land system has also created many challenges such as unfair land acquisition and fraudulent land sales.

²³ Ding, Chengri. and Knapp, Gerrit. 2003. "Urban land policy reform in China". Lincoln Institute for Land Policy online. <https://www.lincolninstitute.edu/publications/articles/urban-land-policy-reform-china> (retrieved, June 7, 2019).

²⁴ You-Tien, H., 2010. *The great urban transformation: Politics of land and property in China*. Cary, NC: Oxford University Press.

Evidence shows that only one-third of the total 163,000 hectares of state-owned land that was sold in 2005 was done through “bidding, auction, and listing” – in other words, at market prices.²⁵ According to new evidence, the auction systems themselves may have been subject to corruption.²⁶ Since 2000, urban growth is also estimated to have encroached on farmland at a rate of 0.04 hectares per urban resident.²⁷ Between 1990 and 2010, it is estimated that local governments expropriated rural land around RMB 2 trillion below market value, to make way for peri-urban expansion.²⁸ This undermining of individual land rights is clearly in direct contrast to the principles enshrined in Chinese laws. Unsurprisingly, this has led to public concern, according to surveying, around 65% of social unrest in China can be attributed to land disputes stemming from issues of illegal expropriation, inadequate compensation or forced land seizures.²⁹

Urban growth is estimated to have encroached on Chinese farmland at a rate of 0.04 hectares per urban resident.

Key lessons from the Chinese experience with relevance for Africa

Given China’s unique land tenure system, any lessons may be more relevant to African countries with largely publicly owned land and less relevant to those with land largely privately owned. It’s important to note that across Africa, there is great variation in terms of land tenure systems. In some cities like Addis Ababa, the government acts as the principal owner of urban land and the key promoter of redevelopment. In others like Nairobi and Kigali, land ownership has undergone large-scale transitions from customary to state-administered systems of private property ownership. Despite this, a common link across African cities, is that they grapple with overlapping systems of customary and formal tenure coupled with weak administration, often leaving institutional structures around land confusing and amorphous. One city that epitomises the challenges in land tenure is Kampala, Uganda (see Case Study 1).

Although the complexity of four concurrent tenure systems is very specific to Kampala, the situation of overlapping tenure and insecure land rights is one that is prevalent across African cities.³⁰ This is one of the major reasons for urban sprawl and ineffective urban form as land is not used efficiently, given it cannot easily be transacted. Dysfunctional land markets then have numerous other implications, including discouraging private investment overall and

²⁵ Fewsmith, Joseph. “‘Social management’ as a way of coping with heightened social tensions.” *China Leadership Monitor* 36, no. 6 (2012).

²⁶ Li, M. 2019 “Information and Corruption: Evidence from China’s Land Market Auctions.” Presentation at the International Conference on China Urban Development: Paradigm Shift to Quality Urbanisation. Beijing

²⁷ Woetzel, Jonathan, Lenny Mendonca, Janamitra Devan, Stefano Negri, Yangmel Hu, Luke Jordan, Xiujun Li, Alexander Maasry, Geoff Tsen, and Flora Yu. “Preparing for China’s urban billion.” *McKinsey Global Institute* 1 (2009).

²⁸ Page, Jeremy, and Brian Spegele. “Land dispute in China town sparks revolt.” *The Wall Street Journal* (2011).

²⁹ Göbel, Christian, and Lynette H. Ong. “Social unrest in China.” *Long Briefing, Europe China Research and Academic Network* (ECRAN) (2012).

³⁰ Ibid (19).

hindering the emergence of effective land-based financing. We discuss these factors later in this paper.

CASE STUDY 1: THE COMPLEX OVERLAPPING LAND TENURE SYSTEMS OF UGANDA

Under the Constitution, land in Uganda is vested in the people.³¹ It further recognises the right of people to hold land under four different types of tenure systems, all of which exist in the city of Kampala today. As a direct result of this, Kampala has one of the most complex land tenure regimes of any city in the world.³²

These land tenures cover the two more conventional systems of freehold and leasehold. In addition, there is the third so-called “mailo” tenure system. This system is very specific to Uganda and traces its origins to colonial times. It incorporates 9000 square miles of land owned and managed by the Buganda Kingdom and it is structured with dual-ownership rights: meaning both the land owner and the owner of any permanent structures on the land have basically the same rights.³³ The fourth tenure system is customary tenure which incorporates land that is managed by specific tribes, outside the Buganda Kingdom. Each tribe in Uganda has their own customary rules and regulations on managing land.

The resulting environment is one of very high tenure insecurity and poorly functioning land markets. It is estimated that about 95% of land owners across Uganda do not have officially registered titles, with similar figures for Kampala.³⁴ To further these complexities, there is no complete database or system for land administration.

The Chinese experience could be informative across areas such as maintaining accurate and updated land registries as well as in more complex questions around tenure regularisation.

There are several important areas, beyond land use and allocation, where more learning from the Chinese experience could be useful. These include moving towards more straight-forward administrative areas, such as maintaining accurate and updated land registries, to more complex questions around land-tenure regularisation and improvements around legal and administrative systems. As the case study of Rwanda (see Case Study 2) shows in more detail, it is possible to make swift and effective improvements in these areas. Although when it comes to reforming tenure systems across the continent, Rwanda still remains the exception rather than the norm.

³¹ Government of Uganda. The Constitution of the Republic of Uganda. 1995

³² Mabikke, S. B. (2016) Historical Continuum of Land Rights in Uganda: A Review of Land Tenure Systems and Approaches for Improving Tenure Security, *Journal of Land and Rural Studies* 4(2), pp.153–171.

³³ Ibid (29).

³⁴ Ibid (30).

CASE STUDY 2: RWANDA'S QUICK AND COST-EFFECTIVE APPROACH TO PARCEL IDENTIFICATION³⁵

Between 2009 and 2013, Rwanda became the first country in Africa to establish a comprehensive, up-to-date and fully digital property registry. Two aspects of the program are particularly notable: (i) the short time required from implementation to delivery – in just 5 years the government systematically demarcated and registered over 11 million parcels – and (ii) the low cost of registration at just \$6 per parcel, well below international averages.

Before the parcel identification program, Rwanda was ranked 137th in the world for ease of property registration by the World Bank's Doing Business Report; it is now ranked 4th. This shift makes Rwanda a much more attractive location for investment. Moreover, following formal land registration, land-related government revenues have increased over five-fold from approximately RwF 2bn (\$3.3m) in 2011 to over RwF10bn (\$15m) in 2013.³⁶

Digitised parcel demarcation



Source: adapted from Ngoga, H.T. (2018) Rwanda's Land Tenure Reform: from non-existent to best practice, CABI

Before the parcel identification program, Rwanda was ranked 137th in the world for ease of property registration; it is now ranked 4th.

Rwanda's land-related government revenues have increased over five-fold from approximately \$3.3 million in 2011 to over \$15 million in 2013.

³⁵ Ngoga, Thierry Hoza. *Rwanda's land tenure reform: non-existent to best practice*. CAB International, 2018.

³⁶ Collier, P., Glaeser, E., Venables, T., Manwaring, P., & Blake, M. "Secure, legally enforceable and marketable land rights for urban development". Final Report, IGC online: <https://www.theigc.org/wp-content/uploads/2017/08/land-rights-policy-framing-paper-FINAL.pdf>. (retrieved June 20, 2019).

Realistic and proactive urban planning

Over the last half century, most Chinese cities were, in principle, supposed to have been constructed according to rigid master plans that set forth the economic functions of each city according to their population sizes, spatial development and consumption paths.³⁷ Municipalities, under the central government, are meant to submit these plans for approval: each following the nation's guidelines for protecting the ecosystem, consuming resources efficiently and promoting sustainable development and public welfare. However, in practice the majority of municipalities focus their master plans on land consumption needs, driven primarily by the need to raise own-source revenue, rather than enhancing city development and sustainability.³⁸ Whilst this has provided some advantages in terms of China's ability to meet the demands of rapid urbanisation, it has often come at the cost of sacrificing liveability.

As we show in Case Study 3 of Shanghai below, some Chinese cities have made significant progress coordinating their urban planning efforts to ensure land is serviced with critical infrastructure in advance of settlement. This infrastructure, particularly transport infrastructure, has been used to actively shape locations and patterns of urban development.

CASE STUDY 3: URBAN REDEVELOPMENT IN SHANGHAI

Originally a small set of fishing villages, Shanghai is now estimated to be the largest city by population in the world. Now hosting around 23.5 million people, the city's population has doubled in size since 1987. Shanghai is home to one of the world's most iconic financial centres and boasts some of China's most prime real estate, including the world's second tallest skyscraper – the 632-meter Shanghai Tower.

The growth of Shanghai can largely be attributed to massive redevelopment of the downtown area in the 1990s. With the new land-leasing system in place, developers looked to make large profits from real estate investments, demolishing old dilapidated neighbourhoods and replacing them with modern towers.³⁹ Many found Shanghai's building growth unsettling, citing it as a real estate bubble.⁴⁰ However, its record today is testament to the municipality's capacity to anticipate the demand for urbanisation.

³⁷ Song, Yan, and Xiaohong Pan. "Toward better plans to guide smart development in Chinese cities." *Smart Urban Growth for China*, Cambridge, Mass.: Lincoln Institute of Land Policy(2009): 193-214.

³⁸ Ibid.

³⁹ Amirtahmasebi, Rana, Mariana Orloff, Sameh Wahba, and Andrew Altman. *Regenerating Urban Land: A Practitioner's Guide to Leveraging Private Investment*. The World Bank, 2016.

⁴⁰ Milton Friedman famously called Shanghai Pudong "a statist monument for a dead pharaoh on the level of the pyramids." Mayor Xu Kuangdi responded to such criticisms by saying Pudong was like buying a suit a few sizes too big for a growing boy.

Shanghai's Pudong area. Now home to some of the world's most expensive real estate, much of Pudong was marshland in the 1980s.



Source: Getty Images/Jackson Pal

China's land system has also incentivised in the rapid construction of real estate. In Figure 2, we show China's residential real estate inventory by city type.⁴¹ Real estate inventory is measured by the ratio of floor space unsold to floor space sold during the period, with the ratio expressed in terms of years of overhang. According to the data, the inventory ratios across urban China has ranged from 0.4-4, meaning certain cities have had a surplus of property that could accommodate anywhere between four months to four years of urbanisation. This abundance of property has allowed China substantial room to accommodate large populations moving towards cities.

Rapid and large-scale housing investment has also been facilitated by high rates of savings adopted by Chinese households.⁴² High savings have meant that household investments could afford quality and residential height that supported density and improved urban planning. This is one major reason why China has urbanised without the creation of large slums as both individuals and the government had the savings to fund housing infrastructure.

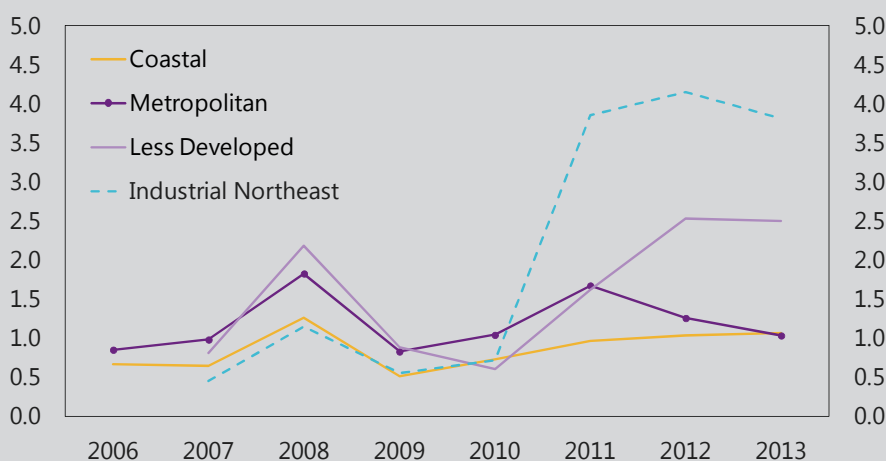
Large-scale construction has also contributed to challenges, many of which are now being felt as China's urbanisation has slowed down. These challenges

⁴¹ Chivakul, Mali, Mr Raphael W. Lam, Xiaoguang Liu, Wojciech Maliszewski, and Mr Alfred Schipke. *Understanding residential real estate in China*. No. 15-84. International Monetary Fund, 2015.

⁴² China's household savings rates have often been noted as an international outlier (See Angang, 2012; or Prasad, 2009). Following the precarious economic and political situation prior to 1978, and the high growth rates experienced thereafter, it is argued that individuals saved most of their increases in income as opposed to spending it on consumption. According to the IMF, for the United States and other advanced economies, as well as emerging and developing countries, Gross Domestic Savings rates generally hover between 20-30% of national GDP, whereas in China, gross savings rates have averaged around 40 percent since 1980.

include urban sprawl, ghost cities, and dormitory housing. In addition, there are growing concerns of Chinese property bubbles that could have large repercussions not only for the Chinese financial sector but for the global economy overall. There is now an increasing call for policy shifts towards regeneration of urban spaces that have been built already, such as is the case of Shanghai noted in Case Study 3, rather than co-opting more space for further real estate construction.

Figure 2: China's residential real estate inventory ratio across difference regions between 2006 and 2013



Note: The real estate inventory ratio is represented by the time it would take for housing inventory to be accommodated holding the current stock constant.

Source: Chivakul et al. (2015)

The urban *Hukou* system is another important, but often controversial, policy tool that was used to plan settlement into Chinese cities. *Hukou* is a system of household registration that determines where citizens can reside and what kind of access they have to public services such as pensions, healthcare, and education.⁴³ There is great variation across regions in terms of the public services that are awarded to citizens of different *Hukou* groups: urban households have tended to have much greater benefits, while rural households have tended to be left behind. Even within cities, the system has made it difficult for people to improve their social status, as it is practically impossible to switch *Hukou* residency and gain better access to services even after moving to a new residence. In this sense, *Hukou* has been a tool to control migration into cities and to limit any social unrest arising as a consequence of over-migration.⁴⁴ The has resulted in wider inequalities that are now retroactively trying to be addressed. Relaxation of the *Hukou* system has recently become a common

***Hukou* has been a controversial policy tool used to plan settlement in China. *Hukou* is a system of registration that determines where citizens can reside and what kind of access they have to public services based on where they were born.**

⁴³ Fudla, Andreas. "Outdated 'urban passports' still rule the lives of China's rural citizens. Independent online: <https://www.independent.co.uk/news/world/politics/outdated-urban-passports-still-rule-the-lives-of-china-s-rural-citizens-a7517181.html>. (retrieved June 24, 2019)

⁴⁴ Ibid.

initiative for cities such as Guangzhou, Wuhan and Chongqing, in their efforts to attract more migrants.⁴⁵ However, this too has come with its share of controversy as incumbent residents fear the threat of lower-quality services if resources are increasingly going to be spread across more people.⁴⁶

Key lessons from the Chinese experience with relevance for African cities

Many developing cities are wary of the influx of people they expect to face in the coming decades, often imposing restrictions on migration and land use as an attempt to curb their growth. However, the Hukou system shows that restriction on within-country migration can lead to very undesirable outcomes. Likewise, recent research shows that planning policies to restrict building development typically have little effect on preventing urban sprawl – instead they can engender other downsides such as higher rents in the city centres.⁴⁷ These poor planning decisions can be extremely costly and long lasting as shown in Case Study 4 of Nairobi.⁴⁸ This is a result of two features. Firstly, it is expensive to provide infrastructure and services if places have been allowed to sprawl over large areas. Secondly, retrofitting infrastructure after settlement can be much more costly, both financially and in terms of disruption.

CASE STUDY 4: THE CONSEQUENCES OF POOR PLANNING IN NAIROBI

Nairobi has often been touted by leaders in Africa for its potential to be one of the continent's economic powerhouses and a "world-class city region."⁴⁹ However, poor planning policies and perennial issues around land systems have meant Nairobi has actually seen rapidly rising inequalities.

⁴⁵ Sheehan, Spencer. "China's Hukou reforms and the urbanisation challenge. The diplomat online: <https://thedi diplomat.com/2017/02/chinas-hukou-reforms-and-the-urbanisation-challenge/>. (retrieved June 24, 2019).

⁴⁶ Lu, Rachel. "China is ending its 'apartheid.' Here's why no one is happy about it. Foreign policy online: <https://foreignpolicy.com/2014/07/31/china-is-ending-its-apartheid-heres-why-no-one-is-happy-about-it/>. (retrieved June 24, 2019).

⁴⁷ Angel, Shlomo, Alejandro M. Blei, Jason Parent, Patrick Lamson-Hall, N. Galarza-Sanchez, Daniel L. Civco, and K. Thom. "Atlas of urban expansion—2016 edition." *Areas and densities. Cambridge, MA: NYU Urban Expansion Program at New York University, UN-Habitat, and the Lincoln Institute of Land Policy* (2016).

⁴⁸ Baruah, Neeraj G., J. Vernon Henderson, and Cong Peng. "Colonial legacies: shaping African cities." (2017).

⁴⁹ Myers, Garth. "A world-class city-region? Envisioning the Nairobi of 2030." *American Behavioral Scientist* 59, no. 3 (2015): 328-346.

Roughly 60 percent of households live in informal slum-like conditions, as defined under the Millennium Development Goals.⁵⁰ The complex history of land ownership coupled with weaknesses in urban planning have been major contributors to this widespread informality. Unrealistic restrictions on building and land use push much of the city to informality and discourage private sector investment in affordable formal housing. For instance, the minimum legal plot size for formal households is one-sixteenth of an acre, which is completely unaffordable for the average household.⁵¹ Furthermore, it is estimated that only 2 percent of formally constructed houses are targeted to the lower income segments of the market, although they account for the largest share of demand.⁵²

These weaknesses in urban management have led to the proliferation of slums in Nairobi. This includes Kibera, the largest slum on the African continent. One current estimate puts the cost of land misallocation in Kibera at over \$1 billion; thus, the market value of titled land would in theory be high enough for each landlord to be compensated at the value of all their future rents, and each tenant household to be compensated with £16,000 (roughly 25 years' worth of rent payments).⁵³

Kibera slum occupies a 3km² area in central Nairobi. It is Africa's largest informal settlement. A combination of poor planning policies and weaknesses in land institutions have contributed to its proliferation.



Source: Getty images.

One estimate puts the cost of land misallocation in Kibera at over \$1 billion. This is high enough for each landlord to be compensated at the value of all their rents and for each tenant to be compensated with \$16,000.

⁵⁰ The World Bank Group. "Kenya urbanisation review." 2016. Accessed online: <http://documents.worldbank.org/curated/en/639231468043512906/pdf/AUS8099-WP-P148360-PUBLIC-KE-Urbanisation-ACS.pdf>. (retrieved July 12, 2019).

⁵¹ Ibid.

⁵² Ibid.

⁵³ Henderson, J. Vernon, Tanner Regan, and Anthony J. Venables. "Building the city: sunk capital, sequencing, and institutional frictions." (2016).

It seems that one major lesson from China's experience is that rather than restricting the movement of people, proactively planning for their arrival is a route that can have more desirable outcomes. This is underpinned by some evidence from Africa suggesting that settlements emerging in areas that were planned better from the outset are also likely to stay that way in years to come. For example, research on slum upgrading and sites and services projects in Tanzania shows that areas that received critical infrastructure in advance of settlement ended up being better planned and better serviced even 30 years later.⁵⁴ The improved planning subsequently resulted in land values on average five times higher than other areas that received the same amount of investment in the form of retrospective slum upgrading, but did not have planning in advance of settlement.

Rather than restricting the movement of people, proactively planning for their arrival can have more desirable outcomes.

Having a better understanding of the Chinese planning experience, both in terms of opportunities and pitfalls, could be useful for some African cities. It is important that cities take on proactive and realistic plans that account for local government capacity and incentives. Once cities have an effective arterial road and infrastructure system in place, it is much more likely that a formal real estate market can flourish. Here, the government has a key role to play in providing the core infrastructure that enables growth to occur in a structured and planned manner from the outset. An example of how this can be done cheaply and efficiently is outlined in Case Study 5, although this is only starting to be explored and examples of such initiatives are limited across the continent.

CASE STUDY 5: MAKING ROOM FOR URBAN EXPANSION IN ETHIOPIA⁵⁵

The Ethiopian government has partnered with New York University's Marron Institute to advocate a new model of urban planning. It focuses on making room for a growing city, but at the same time deeply involves the community. This approach aims to build the platform upon which cities can accommodate expected growth through three basic principles: (i) allowing cities to grow with requisite land for expansion, (ii) ensuring land is planned and serviced with core infrastructure, and (iii) securing the rights for their use.

Initial results show that these new, simple and cost-effective plans have allowed for the creation of arterial roads and public spaces, bringing the available land supply in line with projected growth. Importantly, given that the plans were undertaken with the communities' involvement, they are more widely accepted and therefore have a higher likelihood of being followed. An additional benefit of this type of planning is that local governments have been strengthened and a new university has trained hundreds of urban planners.

⁵⁴ Michaels, Guy, Dzhamilya Nigmatulina, Ferdinand Rauch, Tanner Regan, Neeraj Baruah, and Amanda Dahlstrand-Rudin. "Planning ahead for better neighborhoods: long run evidence from Tanzania." (2017).

⁵⁵ Ibid.

However, city planning in the Ethiopian context, like with many African countries, has been challenging. For example, the advent of the Addis Ababa master plan previously led to widespread discontent by the Oromo ethnic group because large tracts of land, especially those used for agriculture, were to be transferred into the municipality and used for housing or industry. This led to widespread riots, which heavily affected national planning.

Finally, investments in infrastructure and future service provision should also proactively consider questions concerning the equality and vulnerabilities of different residents in the city. Addressing this from the outset can thus help avert the high levels inequality currently observed in many Chinese cities.

Supportive land and building use regulations

Land use regulations and building standards have significant effects on urban form.⁵⁶ A well-regulated real estate sector should operate within the boundaries of appropriate safety standards and land use requirements, without significant distortions to housing supply and affordability. However, excessive regulation can price residents out of the housing market, side-lining them to informality. Public policy has to make astute choices based on available resources in order to balance these priorities between housing to meet basic needs versus housing to satisfy certain standards.

A good real estate sector operates within appropriate safety standards and land use requirements, without significant distortions to housing supply and affordability.

In China, the government has a strong influence on the real estate sector. Although, private entities play a significant role in real estate development thanks to land-leasing, this is done in practice through close public guidance. Like many countries, this regulation is in the form of land use restrictions to control urban development, such as maximum floor-area ratios.⁵⁷ Research on 30 major Chinese cities shows that such regulations often impose restrictive constraints, which are also difficult to enforce.⁵⁸ As such, developers often fail to comply with the system by building floor area above the regulatory limits.⁵⁹ Unrealistic restrictions are also an avenue for corruption and it has been noted that particularly firms with close-ties to the government are often the most persistent violators of land-use regulation. At the same time, evidence also suggests that regulatory FAR limits in urban China are much lower than the FAR levels that would maximize land value, especially for land parcels in relatively more attractive locations.⁶⁰

⁵⁶ Bertaud, A., 2018. *Order without design: how markets shape cities*. MIT Press.

⁵⁷ Glaeser, Edward, Wei Huang, Yueran Ma, and Andrei Shleifer. "A real estate boom with Chinese characteristics." *Journal of Economic Perspectives* 31, no. 1 (2017): 93-116.

⁵⁸ Cai, Hongbin, Zhi Wang, and Qinghua Zhang. "To build above the limit? Implementation of land use regulations in urban China." *Journal of Urban Economics* 98 (2017): 223-233.

⁵⁹ Ibid.

⁶⁰ Ibid.

Key lessons from the Chinese experience with relevance for African cities

The sufficient provision of affordable housing is a major challenge across African cities – both for the residents who have already settled as well as for the future residents to come. Large-scale formal investment in low-cost housing is currently not underway, typically households live in low-cost shacks that do not comply with regulatory standards, have informal occupancy rights, and poor infrastructure. These issues relate to the policy challenges that we have so far highlighted. Unclear ownership systems that lock land markets in. Inefficient regulations which price low-income households out of the market and disincentivise formal private construction. The lack of planning ahead of settlement to ensure provision of housing either directly by the government or by the private sector based on foundational public infrastructure.

Some countries like Ethiopia (see Case Study 6) have attempted to respond to the housing challenge through the provision of large-scale public social housing. However, most African governments cannot afford to finance such large-scale social housing provision and many similar projects have failed. An exemplary case is in Luanda, Angola, where a \$3.5 billion social housing project developed on the outskirts of the capital, resulted in unit prices far above what low-income residents could realistically afford: apartments had a starting price of \$120,000 in a country where per capita incomes are just over \$4,000.⁶¹ An additional problem for the provision of large-scale housing, as highlighted by the Ethiopian case, is its frequent location on the outskirts of cities. Without commensurate investments in transportation, these areas become inaccessible. It is often the case that the people who have been rehoused in the outskirts then decide to move back to more conveniently located slums, thus not resolving the problems of affordable housing and informal settlements.⁶²

In Luanda, Angola, a \$3.5 billion social housing project resulted in apartments which had a starting price of \$120,000 despite per capita incomes being just over \$4,000.

One area where China's experience may be instructive is how to stimulate the private real estate market. Here, the regulatory environment will play a key role. While African and Chinese cities have had their own challenges with regards to regulations, the nature of these challenges, and its consequences, are very different. In particular, many African cities have inherited their housing systems and associated regulations from colonial times, which impose unrealistic standards, such as on wall thickness, room size, foundation depth and minimum plot size. Unlike the Chinese situation, where property developers seek to build above and beyond the low threshold density restrictions, in many African cities, the state imposes high standards for formal property development which are extremely difficult to meet without significantly raising property prices. In Dar es Salaam, Tanzania, the minimum housing lot size is 375m², as compared to 30m² in Philadelphia, a city in the US where average

⁶¹ Collier, Paul., Glaeser, Edward., Venables, Anthony., Manwaring, Priya., and Blake, Michael. "Policy options for informal settlements". Final Report, IGC online: <https://www.theigc.org/wp-content/uploads/2019/03/informal-settlements-policy-framing-paper-March-2019.pdf>

⁶² Collier, Paul., Glaeser, Edward., Venables, Anthony., Manwaring, Priya., and Blake, Michael. "Policy options for informal settlements". Final Report, IGC online: <https://www.theigc.org/wp-content/uploads/2019/03/informal-settlements-policy-framing-paper-March-2019.pdf>

incomes are far higher. Given that these regulations are wholly unrealistic, they are also unenforceable: in the described case of Dar es Salaam, an estimated 90% of the city fails to comply with the imposed standards.⁶³ This is what leads to the emergence of informal housing and stymies the emergence of large-scale formal housing.

While restrictions can be important for maintaining the quality of the urban fabric as well as promoting aspects such as safety, it is critical that building standards reflect the needs of the city. This can help ensure that the costs of compliance do not impair urban growth or push citizens into informality. Some level of non-compliance is likely inevitable, but it is reduced when the benefits of non-compliance are low and the costs high. This is an area that can further be explored, particularly how to ensure there is enough housing for settlement at the same time avoiding the pitfalls that China has experienced with its housing market, as there are urgent needs for further reform in Africa.

Unlike in China, where property developers seek to build above density restrictions, in many African cities, property standards are unrealistically high and extremely difficult to meet.

CASE STUDY 6: ADDIS ABABA'S INTEGRATED HOUSING AND DEVELOPMENT PLAN

More than two-thirds of citizens in Addis Ababa live with poor housing conditions such as over-crowded spaces, informal building materials, and a lack of access to clean water and sanitation.⁶⁴ Current estimates suggest that the housing deficit could be as high as half a million units.⁶⁵ At the same time, the city population is expected to double in the next ten years to over 8 million. In the face of its growing urban population, the government has embarked on its ambitious Integrated Housing and Development Plan (IHDP).⁶⁶

To date, the government-driven housing program has built and transferred over 200,000 flats to owner-occupiers via a lottery system.⁶⁷ The state plans and builds these apartments at large-scale, outsourcing construction to private firms and providing connective infrastructure such as roads, sewerage and water in return. Most of the housing is built on the city periphery where land and local wages are cheaper, helping to reduce program costs. This has allowed the program to be self-financed without any assistance from foreign donors.

Many see the housing program as a rare success in Africa. Research shows that the beneficiaries see dramatic improvements in their housing quality as well as a much greater willingness to invest in their

The IDHP has transferred over 200,000 flats to owner-occupiers in Addis Ababa. Many see the housing program as a rare success, with beneficiaries seeing dramatic improvements in housing quality.

⁶³ Ibid (19)

⁶⁴ Franklin, Simon. "The demand for government housing: Evidence from lotteries for 200,000 homes in Ethiopia." (2019).

⁶⁵ Gardner, T. "'Addis has run out of space': Ethiopia's radical redesign". The Guardian online: <https://www.theguardian.com/cities/2017/dec/04/addis-ababa-ethiopia-redesign-housing-project> (retrieved June 13, 2019).

⁶⁶ Ibid.

⁶⁷ Ibid (35).

properties.⁶⁸ In turn, the developments become vibrant economic spaces, generating new sources of income and employment. Furthermore, the program is heavily oversubscribed such that many show a strong willingness to move out of slums in favour of the condominiums.

Others see the program as contentious, drawing the government deep into debt whilst still failing to provide housing that is affordable to the average citizen. Many that win the lottery later choose to rent the property in order to pay off the mortgage.⁶⁹ Some never take up residence because the condominiums are too far away from jobs in the centre.⁷⁰ Furthermore, transport investments have not kept at pace, so with many of the condominiums located on the outskirts of the city, some argue it causes social exclusion.

New condominium developments on the outskirts of Addis Ababa.



Source: Charlie Rosser

The critical role of infrastructure and public services

As cities grow, governments have to make major investments. Larger cities inherently require more effective provision of public services and infrastructure – such as housing, transport, energy, and water – so they can become places of rising living standards and productive industries. These public investments can coordinate and encourage other complementary investments taken on by households and firms.

⁶⁸ Ibid (35).

⁶⁹ Ibid (35).

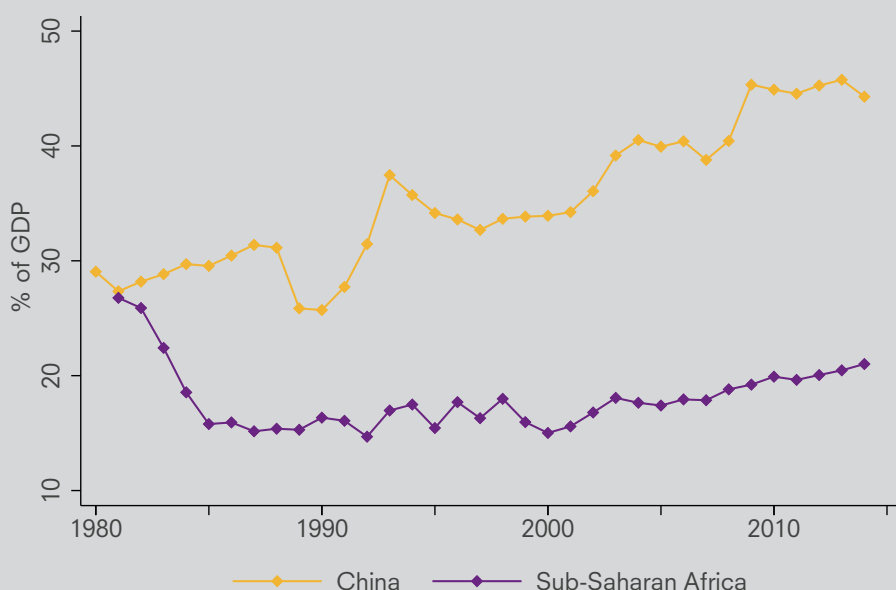
⁷⁰ Ibid (35).

The Chinese approach to infrastructure and public service investment

High fixed capital investments in industry and infrastructure were key to China's early stage development and urban transition. In Figure 3, we use World Bank data to compare the rates of gross capital formation in China and Africa. Africa had roughly the same investment share of GDP as China did in 1980; however, it has consistently seen a rising share of investment in GDP since, which has been coupled with rising income levels. Contrastingly, over the period, Africa's share of investment in GDP has fallen, while GDP has roughly stagnated.

High fixed capital investments in industry and infrastructure were key to China's early stage development and urban transition.

Figure 3: Gross capital formation (% of GDP) in China vs Sub-Saharan Africa 1980-2015



Note: GCF is otherwise known as gross investment, it consists of outlays on additions to the fixed assets of the economy plus net changes in the level of inventories.

Source: World Development Indicators

China's higher investment levels have served to facilitate massive infrastructure programs undertaken over the last four decades. For instance, China did not have any high-speed rail in 1999, but by 2010 had 7,400 kilometres worth of track - the highest in the world.⁷¹ Road construction has been similar: by the end of 2010, China had 74,000 kilometres of highway, second only to the United States.⁷² China has also become the leading producer of electric power, surpassing the United States in 2011.

China did not have any high-speed rail in 1999, but by 2010 had 7,400 kilometres worth of track – the highest in the world.

Although China has now become a world leader in renewable investments, its concern for the environmental consequences of rapid urbanisation is relatively recent. Hence, its past investments and population growth has been coupled with increased environmental stress. For example, between 1980 and 2010 oil

⁷¹ Ibid (35).

⁷² Ibid (8).

and coal consumption in China doubled every twelve years and electricity usage doubled every five.⁷³ Moreover, according to the World Bank, 16 of the 20 most polluted cities are in China;⁷⁴ while Greenhouse Gas Emissions is said to be the third leading cause of death in Chinese cities.⁷⁵ These environmental stresses extend to water: out of a survey of 198 cities in 2012, 57% of groundwater was rated either bad or extremely bad, whilst 40% of rivers were deemed seriously polluted.⁷⁶ This will have further knock-on effects in the future as urban water demand is already outpacing supply by as much as 6 billion cubic meters per year.⁷⁷ Although China has now adopted a model of “ecological civilisation” that is expected to move urbanisation forward in a more sustainable and resilient manner, some question whether this consideration has been incorporated too late.⁷⁸

A 2012 survey of pollution in 198 Chinese cities showed that 57% of groundwater was rated bad or extremely bad, whilst 40% of rivers were seriously polluted.

Key lessons from the Chinese experience with relevance for African cities

While infrastructure has improved dramatically across Africa over the last few decades, many cities still have major deficiencies. In transport, it is estimated that the density of paved roads in Sub-Saharan Africa is less than one quarter of other low-income regions.⁷⁹ With unpredictable and unreliable roads, high transport costs lower firm productivity and competitiveness in trade.⁸⁰ Power is another example, where Africa has around half the generating capacity per person compared to South Asia.⁸¹ Without reliable energy, large firms have to depend on their own back-up generators, while others struggle to operate without power.⁸² Furthermore, only 33 percent of urban households in Sub-Saharan Africa has access to piped water on premises in 2015, compared to an average of 79 percent worldwide.⁸³

It is estimated that the density of paved roads in Sub-Saharan Africa is less than one quarter of other low-income regions.

⁷³ Ibid (42).

⁷⁴ World Bank. *Urban China: Toward efficient, inclusive, and sustainable urbanisation*. World Bank, 2014.

⁷⁵ Feigin, Valery L., Mohammad H. Forouzanfar, Rita Krishnamurthi, George A. Mensah, Myles Connor, Derrick A. Bennett, Andrew E. Moran et al. "Global Burden of Diseases, Injuries, and Risk Factors Study 2010 (GBD 2010) and the GBD Stroke Experts Group. Global and regional burden of stroke during 1990-2010: findings from the global burden of disease study 2010." *Lancet* 383, no. 9913 (2014): 245-54.

⁷⁶ Ibid (59).

⁷⁷ Ibid (42).

⁷⁸ Wu, F. 2019 "Adding New Narratives to Urban Imagination: An Introduction to New Directions of Urban Studies in China."

⁷⁹ Vivien, Foster, and Cecilia Briceño-Garmendia. "Africa's Infrastructure: A Time for Transformation." In Foster, V. and C. Briceño-Garmendia (2010), *Africa's Infrastructure: A Time for Transformation*, Africa Development Forum, World Bank, Washington DC. 2010.

⁸⁰ Donaldson, Dave, Amanda Jinhage, and Eric Verhoogen. "Beyond borders: Making transport work for African trade." IGC Growth Brief Series 9 (2017).

⁸¹ Collier, Paul, and Anthony J. Venables. "Urbanisation in developing economies: the assessment." *Oxford Review of Economic Policy* 33, no. 3 (2017): 355-372.

⁸² Ibid.

⁸³ Dos Santos, Stéphanie, E. A. Adams, G. Neville, Y. Wada, A. de Sherbinin, E. Mullin Bernhardt, and S. B. Adamo. "Urban growth and water access in sub-Saharan Africa: Progress, challenges, and emerging research directions." *Science of the Total Environment* 607 (2017): 497-508.

An important aspect to further scrutinise the Chinese experience is how to plan for, finance and coordinate major infrastructure investments. In addition, given that much of the infrastructure investment currently happening in African cities is both being financed by the Chinese government and constructed by Chinese companies, this is an area where understanding China's role in African urbanisation will also be key. Unlike the Chinese experience, it will be imperative that African countries understand how such large-scale investments can be made, incorporating considerations for the climate and the environment, to ensure sustainability and resilience for these investments from the outset.

Improving urban governance and municipal finance

Under conducive institutional structures in cities, firms grow and new businesses start up, creating thousands of new jobs annually. Productivity growth should then become a self-sustaining process: as employment increases, income and market size expand, more funds become available for public investments and firms achieve the scale and specialisation needed to make them competitive. All of these factors are required to ensure that cities work better to accelerate economic transformation, the pace of which, therefore, is dependent on the alignment of existing power structures.

The underpinning features of institutions can broadly be categorised into three groups: responsibility, capacity, and legitimacy:⁸⁴

- **Responsibility:** relates to who or which agency makes a given policy decision in a city. In essence, this captures how well decision-making authority is assigned and whether there are ambiguities due to overlapping mandates or complex chains of command.
- **Capacity:** reflects the competency of governing authorities to fulfil their mission statements or purposes based on their management and governance structures and their motivation for achieving results. This includes: (i) Human resources: number, skills, experience; (ii) Material/physical resources: capital, assets; (iii) Financial resources: cash flow, credit, access to finance and ability to issue debt; (iv) information: knowledge, databases, advisory services; and (v) dedication to achieve objectives.
- **Legitimacy:** reflects the right to rule of government which is often based on a common narrative of either development, institutional mandate, or descriptive representation. Citizens will rarely accept their government automatically, instead active public policies are required to ensure citizen engagement and a reputation of good performance by the government for its citizens.

⁸⁴ Haas, A.R.N., Wani, S. (2019). "Urban Governance Institutions: Policy Options for Fast Growing Cities" Version 1. IGC Cities that Work Policy Framing Paper. U.N. Habitat. "Urban Governance" UNH online: <https://unhabitat.org/governance/> (retrieved June 3, 2019).

Social learning and policy experimentation in the Chinese case

One of the successes of China's development model and urban transition was the country's capacity for policy learning at a local level. China's development approach was rapid and innovative, but it was also flexible, as personified by the idea of "*crossing the river by feeling the stones*". It was a recognition that coming out of the Mao era, where governing institutions were relatively underdeveloped, the potential repercussions of implementing grand, national-level policies and getting them wrong were immense. Moreover, the sheer size of the country and its inherent regional variations, called for flexibility and a gradual, location specific outlook.⁸⁵

China's development approach was rapid and innovative, but it was also flexible, as personified by the idea of "*crossing the river by feeling the stones*".

Crucially, these ideas meant local governments were effectively empowered in three ways: (i) learning by doing through experimenting with different development approaches; (ii) effective decentralisation of fiscal and administrative functions; and (iii) active incentives to carry out policies. This is not to deny that China still maintained a centrally-controlled state structure, however, the environment created could simultaneously facilitate 'top-down' central sponsorship of policies whilst also mobilising 'bottom-up' initiative through local experimentation.⁸⁶ Local governments could pilot policies that were tailored to local development needs, whilst still being guided by a variety of state-level objectives.⁸⁷

Another important element is the primacy assigned to economic performance in the career evaluation process for Chinese government officials.⁸⁸ Each local government is evaluated through a performance system that rewards local leaders for their success against national development goals.⁸⁹ Successful projects are then scaled-up nationally. This has led to harnessing of large parts of the local bureaucratic apparatus, with the goal of attracting investment, including agencies that would nominally not necessarily have an explicit economic focus.⁹⁰ In combination with fiscal decentralisation, this institutional set-up gives local policymakers the means and incentives to promote local economic development. Furthermore, it supports the advent of a cycle in which increasing urban revenues allowed for additional infrastructure investment, generating further economic activity and ultimately further revenues.

⁸⁵ Florini, Ann M., Hairong Lai, and Yeling Tan. *China experiments: From local innovations to national reform*. Brookings Institution Press, 2012.

⁸⁶ Heilmann, Sebastian. "Policy experimentation in China's economic rise." *Studies in Comparative International Development* 43, no. 1 (2008): 1-26.

⁸⁷ North (1990, 2005) and Naughton (2007), describes the institutional structure as enabling the government to test-out alternative approaches to overcome long-standing development challenges, tackle newly emerging challenges, and grasp opportunities when they open up.

⁸⁸ This is why local policy experimentation has often been described as "smuggling in" incremental policy change in the absence of wholesale institutional transformation (Naughton 1995; Rawski 1999; Lin et al. 2003; Roland 2000; Ramo 2004; Xu 2011).

⁸⁹ World Bank. *Urban China: Toward efficient, inclusive, and sustainable urbanisation*. World Bank, 2014.

⁹⁰ Ang, Yuen Yuen. *How China escaped the poverty trap*. Cornell University Press, 2016.

Social learning and experimentation has led to some of the most important innovations in China's urbanisation and industrialisation cycle. One example is the Special Economic Zone (SEZ) in Shenzhen, which epitomises the strengths of the Chinese model of urban planning coupled with local decentralisation and innovation. Shenzhen is an interesting example to consider (see Case Study 7), it is often regarded as one of the most innovative cities in China for public policy, both in terms of economic reforms as well as its role in promoting urban change.⁹¹ As one of the first ever SEZs piloted in China in the early 1980s, Shenzhen was originally set-up to bypass issues of central planning and offer economic incentives to attract business investment. Among its important economic innovations were the implementation of contract labour and a non-fixed wage system, which brought the city huge efficiency gains via lower labour costs and the ability to attract the best qualified and motivated enterprises.⁹² Shenzhen was also the testing ground for some of China's most important urban land reforms. Ultimately, this led to a highly productive city that spearheaded many aspects of the country's economic transformation.⁹³ Although Shenzhen provided replicable individual innovations and was deemed an overall success, as we discuss later in the paper, three other SEZs launched at the same time were less successful. In this sense, experimentation was not only important for learning what worked and could be scaled, but also for helping policymakers identify failing policies.

CASE STUDY 7: LAND POLICY EXPERIMENTATION IN SHENZHEN

The first ever transaction of land use rights occurred in the Shenzhen Special Economic Zone (SEZ) on the 9th of September 1987, when the municipality sold user rights to a local company over a 50-year lease.⁹⁴ This was despite the fact that the 1982 constitution in effect at the time, which stated that 'no organization or individual may appropriate, buy, sell, or lease land, or unlawfully transfer it in other ways'. Shenzhen modelled its land auction off the Hong Kong leasehold system.⁹⁵

Several more land transactions followed and these set a precedent for monumental changes in Chinese land use management. Within one year, the national government amended the 1982 constitution in order to officially adopt the land-leasing practices of Shenzhen nationwide - paving the way for the substantial urban redevelopment and renewal that Chinese cities have since witnessed.

The first ever transaction of land use rights occurred in the Shenzhen Special Economic Zone (SEZ) on the 9th of September 1987, when the municipality sold user rights to a local company over a 50-year lease.

⁹¹ Yueng et al (2013)

⁹² Ibid.

⁹³ Yeung, Yue-man, Joanna Lee, and Gordon Kee. "China's special economic zones at 30." *Eurasian Geography and Economics* 50, no. 2 (2009): 222-240.

⁹⁴ Zhu, Jieming. "Denationalization of urban physical development: The experiment in the Shenzhen Special Economic Zone, China." *Cities* 13, no. 3 (1996): 187-194.

⁹⁵ Ibid (84)

As the first city to initiate land-leasing, Shenzhen also became one of the first recipients of large-scale commercial interests for real-estate development. As noted, prior to this reform, national and local government had been the primary propagators of capital investment for urban redevelopment across China. However, Shenzhen's land-leasing allowed the legitimate commercialisation of land, thus clearing the way for non-state sectors to undertake large-scale land and property related investments within a more market-based system and therefore reconfiguring the state's role as a regulator of physical development rather than being the dominant player.⁹⁶ Between 1980 and 1990, the proportion of capital construction investment in Shenzhen Municipality from both central and local government fell from 34.1 percent to 11.7. At the same time, annual investment inflows grew almost forty-fold, from an initial 125 million yuan (~80m USD) in 1980 to 5 billion yuan (~ 1.05bn USD) by 1990.

Property developments at Shenzhen harbour



Source: Pixabay lzq19840715

Across China, many other municipalities adopted this culture of policy experimentation and often the central government played an important role in guiding the process. In some cases, the central government has actually instigated urban policy experiments itself, such as several incremental urban housing reforms in the late 1980s and 1990s.⁹⁷ In these cases, the central government chose the pilot experiments, the cities to host them, and ultimately whether they were replicated nationally. This discovery of housing policies through experimentation has since had an important impact on the way housing is produced and consumed in Chinese cities.⁹⁸

⁹⁶ Ibid (85)

⁹⁷ Mei, Ciqi, and Zhilin Liu. "Experiment-based policy making or conscious policy design? The case of urban housing reform in China." *Policy Sciences* 47, no. 3 (2014): 321-337.

⁹⁸ Ibid.

However, despite the notable achievements of local experimentation in cities such as Shenzhen, it has not been without its shortcomings. For example, competition between different regions has occasionally led to redundant infrastructures, as competing local governments duplicate efforts to attract investments. Competition has also disincentivised the cooperation between different provincial and municipal governments, as local officials prioritise the achievements of results with their own resources, rather than developing complementarities with other local governments.⁹⁹ Lastly, some commentators point to the incompatibility between economic imperatives, sustainable development, and the orderly spatial organisation of cities, particularly if officials allow investors to subvert the directives of spatial planning.¹⁰⁰

Local government's ability to capture land values for revenue

The move towards a land leasing system provided local governments in China a crucial source of revenue with which they could finance investments in their cities. Local governments were able to tap into appreciating land values in cities and take control over how these public resources were spent. This process facilitated a cycle in which publicly generated increases in land values, which arose over the course of the urbanisation process, could be captured by the local government and re-invested in cities to ensure they had adequate resources to support their growing needs. Given the rapid rates of urbanisation in Africa to date, this is one financing tool that is currently being explored by local governments. Here it may be instructive to learn from China's experience as it is deemed to be one of the most successful examples of land-based financing to date.

While the Chinese system of land-leasing has brought significant resources to subnational governments, it is also important to note the downsides. Some observers argue it is over-reliant on urban expansion, which has contributed to sprawling cities, whilst also progressively challenging local governments' ability to avail land for auction, particularly as lease-terms have now been extended to 40-70 years.¹⁰¹ One must also consider how municipal finance fits into the broader context of China's national governance and fiscal framework. Uneven decentralisation of the fiscal system has engendered many regional disparities in the per-capita tax base which are typically not allayed by national fiscal transfers. With large gaps between expenditure responsibilities and fiscal resources, many subnational governments have had to take on large debts or use illicit approaches to raise revenues.

Increased local autonomy has also had its downsides. For example, political elites have often been accused of abusing the auction system, pursuing policies

⁹⁹ Leaf, Michael. "Urban planning and urban reality under Chinese economic reforms." *Journal of Planning Education and Research* 18, no. 2 (1998): 145-153.

¹⁰⁰ Wei, Yehua Dennis. "Planning Chinese cities: The limits of transitional institutions." *Urban Geography* 26, no. 3 (2005): 200-221.

¹⁰¹ Yang, T. 2019. "A New Model for Land Value Capture in Planned New Urban Centres: Lessons from the Greater Shanghai Region."

in their own self-interest above the prosperity of their jurisdictions as a whole.¹⁰² For instance, it is argued that competition between local governments for achieving rapid economic growth has often provided incentives for bureaucrats to avoid making better use of underused urban land.¹⁰³ Instead, municipalities are able to generate huge revenues through cheap land requisition in the areas surrounding their cities, and subsequent selling of user rights to industrial activity. This contributes to issues of unfair land acquisition and urban expansion mentioned previously.¹⁰⁴ Another concern is that local officials have often emphasised land allocation to capital-intensive manufacturing above the service industry, potentially limiting the benefits of high urban density - which are argued to be more relevant to the service sector.¹⁰⁵ According to the World Bank, China devotes around a quarter of urban land to manufacturing, whereas cities like Hong Kong and Seoul devote only 5 and 7 percent respectively.¹⁰⁶

Key lessons from the Chinese experience with relevance for African cities

It cannot be emphasised enough that Africa is a large and extremely diverse continent. Hence, each African country, and in fact city, will need to work on identifying their own specific solutions and then to target policy approaches and resources around those. What is important to understand from the Chinese experience is how to encourage policy learning and subsequent scale-up through empowering and incentivising local government. It's also be important to take heed on how to ensure local officials can be incentivised to experiment in ways that maximise public benefit, rather than private gain. Once policy experimentation is deemed successful, the Chinese experience may also provide insights on how to scale these up from a local to a more national level.

From a municipal financing perspective, there are challenges to fully emulating the Chinese model elsewhere, and particularly in Africa as a result of the complexity of their tenure systems. The Chinese model of land-based financing requires the tight administration and public ownership of land that the Chinese government has. Many African countries would have to undertake reforms of their land systems first, before they are able to undertake similar land-based financing.

¹⁰² Li, M. 2019 "Information and Corruption: Evidence from China's Land Market Auctions." Presentation at the International Conference on China Urban Development: Paradigm Shift to Quality Urbanisation. Beijing

¹⁰³ Ibid.

¹⁰⁴ According to Cai and Henderson (2013), in the last three decades the rate of growth in urban built up area has outpaced population growth by almost two-fold, leading to inefficient urban sprawl and declining population densities even in the largest of China's cities. Cai, Hongbin. and Henderson, Vernon. Distorted capital markets in China: the bias towards political cities and state-owned firms. Background paper for Urban China, World Bank, Washington, DC, 2013.

¹⁰⁵ Arzaghi, Mohammad, and J. Vernon Henderson. "Networking off madison avenue." *The Review of Economic Studies* 75, no. 4 (2008): 1011-1038.

¹⁰⁶ Ibid (59).

More importantly, when learning from the Chinese experience, it is important to highlight that their current model of value capture will soon reach its limits. For example, there are policy experiments in Shenzhen that try to emulate Hong Kong's so-called "Rail+Property" model.¹⁰⁷ This model of transit-oriented development allows for the capture of value from public investments in the transportation system. However, it is already facing challenges in its implementation in the Chinese context; for example, outside of Shenzhen, other local governments have found their real estate markets not to be vibrant enough to be willing to experiment with this model.¹⁰⁸ There are a number of other value capture mechanisms that Chinese and African cities may want to concurrently explore, in order to avoid the challenges of relying solely on land-based financing through expansion.

To supplement local government revenue, the Chinese government has been exploring the possibility of introducing a property tax. It has already experimented with this in Shanghai and Chongqing, but has not managed to scale it up nationally yet.¹⁰⁹ This is one area where China could actually learn from the diverse experience with property tax across the African continent, as many countries have had a property tax for a number of years and are currently reforming their systems with positive results.¹¹⁰ For example, administrative reforms in Kampala, Uganda, resulted in increases in property tax collection by more than 100% in the space of four years.¹¹¹

One of the major questions for the Chinese government is the affordability of an introduced tax. In particular, there are fears that the introduction of property taxes could result in a large real estate sell-off, with dire financial implications for the national economy.¹¹² Although the property markets in African cities differ from those in Chinese cities, African policymakers have been grappling with similar issues of ensuring affordability for taxpayers. Here, the introduction of the Land Use Charge (LUC) in Lagos provides an interesting example: in an effort to consolidate a number of prevailing taxes related to property, reforms were done to create one overarching tax, the LUC. To overcome resistance when it was initially introduced in 2001, the Lagos State Government initially set the rate relatively low and rather focused on ensuring it captured as many properties as possible in the tax base. They progressively

China could learn from the diverse experiences of many Africa countries that have had a property tax for a number of years and are currently reforming their systems with positive results.

Administrative reforms in Kampala, Uganda, resulted in increases in property tax collection by more than 100% in the space of four years.

¹⁰⁷ Yang, J. 2019. "Value Capture Beyond Public Land-Leasing: Funding Rail Transit in China's Pearl River Delta."

¹⁰⁸ Ibid.

¹⁰⁹ Reuters online: "China's property tax will be implemented according to the city lawmaker." <https://www.reuters.com/article/china-parliament-property/update-1-chinas-property-tax-will-be-implemented-according-to-the-city-lawmaker-idUSL3N21129L> (retrieved July 3, 2019).

¹¹⁰ Collier, Paul., Glaeser, Edward., Venables, Anthony., Manwaring, Priya., and Blake, Michael. "Land and property taxes for municipal finance". Final Report, IGC online: https://www.theigc.org/wp-content/uploads/2018/11/Land-and-property-taxes-policy-paper-hi-res_designed.pdf. 2018

¹¹¹ Andema, Fred and Astrid R.N. Haas. "Efficient and effective municipal tax administration: a case study of the Kampala Capital City Authority. Final Report, IGC online: <https://www.theigc.org/wp-content/uploads/2018/11/Kampala-case-study-Dec2018.pdf>

¹¹² Ibid (102).

increased rates over time and coupled these with communications campaigns to highlight to the public what infrastructure and services property tax was paying for. Hence, this example also highlights how to communicate the importance of property tax and its link to service provision in order to ensure political buy-in. This could be especially important in the Chinese context as it will be a relatively new tax and thus likely to suffer resistance.¹¹³

Facilitating firm growth and investment

The primary objective of urban policies should be to ensure that cities provide a favourable environment for economic growth and rising living standards. Effective land use and infrastructure policies are the fundamental building blocks needed for increased *connectivity* which allows cities to reap the benefits of scale and specialisation.¹¹⁴ Three types of connectivity matter the most for economic activity:

- 1 Between workers and firms.
- 2 Between households and sellers of locally-consumed goods.
- 3 Between producers and markets for internationally-traded goods.

Connectivity can be improved through two channels: density and transport. Policies that aim to increase productivity by improving connectivity are referred to as “spatial”, or “place-based” economic policies.¹¹⁵ These are distinguished from traditional, non-spatial policies used to improve productivity through other channels, such as tax exemptions or subsidised credit, for example.

Effective spatial policies have played a critical role in the economic success of China and today’s other middle- and high-income countries. The combination of urban density and transportation infrastructure, in particular, allowed the Chinese government to build highly connected cities, lowering the costs for firms and workers and simultaneously fostering urbanisation and industrialisation. Improved cost competitiveness in turn meant that firms in these cities had better prospects of competing in international markets, which offered further opportunities for their expansion and concomitant increases in productivity.

As outlined in the section on governance, it is also important that local governments have capacity to plan and implement effective policies. A key feature of the Chinese institutional setting was that urban and economic planning were closely integrated and coordinated across government. This was underpinned by China’s huge population and large surplus of rural labour, which meant its urban and industrial growth strategy could capitalise on low-cost migrant labour – often offering only partial access rights to the city in return. At the same time, planning processes were given scope to flexibly adapt

¹¹³ Ibid (102).

¹¹⁴ This discussion draws on Collier (2016) (Ibid 3).

¹¹⁵ Duranton, Gilles, and Anthony J. Venables. *Place-based policies for development*. The World Bank, 2018.

policies to short-term changes.¹¹⁶ This meant authorities could support firm growth by being responsive to their changing requirements.

Special Economic Zones (SEZs)

Special Economic Zones (SEZs) are one of the main spatial policies that can be used by governments as a tool for industrialisation. An SEZ is a delimited geographic area where bespoke infrastructure and a differential regulatory regime are used to attract certain kinds of investments. Whilst there is a long story of using economic enclaves for commercial purposes, the modern concept of SEZ arose in the post-war period, starting with the zone in Shannon, Ireland, in 1958.¹¹⁷ Export-processing zones (EPZs), a specific type of SEZ, were also an important part of the development experiences of many East and Southeast Asian countries before 1979.¹¹⁸ However, the wide use of SEZs took off in the 1980s and 1990s, as increased capital mobility in the global economy, coupled with improvements in the transport and communications sectors, allowed firms from more developed countries to search for low-cost production sites around the world.¹¹⁹

China was at the forefront of this trend in the world economy. The Chinese SEZ programme, initiated in 1979 and later greatly expanded, was the most iconic country experience with SEZs and has inspired the recent uptake of this policy tool as a means of promoting industrialisation in many developing countries. The emergence and success of the SEZ model in China owes in large part to the strengths of the Chinese policy process. In fact, all industrial zones had to address similar issues such as the provision of land and infrastructure, connectivity to a suitable workforce and to international markets, and how to cope with environmental issues.¹²⁰ How this was done differed both across China and across time. Various combinations of spatial and non-spatial policies have come to characterise the different types of SEZs in China. This diversity also underscores the role of contextual factors in shaping the specific models of SEZ that are introduced. For example, the so-called “comprehensive SEZs” such as the original four in Shenzhen, Zhuhai, Shantou and Xiamen, and later versions in Hainan, Shanghai Pudong, and Tianjin Binhai, all included entire urban areas within the scope of a special regulatory regime. This facilitated the integration of urban and economic planning. However, other types of SEZs, such as economic and technological development zones (ETDZs) or high-tech

¹¹⁶ Heilmann, Sebastian. "Making Plans for Markets: Policies for the Long Term in China." *Harvard Asia Quarterly* 13, no. 2 (2011): 33-40.

¹¹⁷ Bach, Jonathan. "Shenzhen: From Exception to Rule." O'Donnell, Mary Ann, Winnie Wong, and Jonathan Bach, *Learning from Shenzhen: China's Post-Mao Experiment from Special Zone to Model City* (2017): 23-37.

¹¹⁸ Naughton, Barry J. *The Chinese economy: Adaptation and growth*. Second Edition. MIT Press, 2018, p. 428.

¹¹⁹ See Baldwin, Richard. *The great convergence*. Harvard University Press, 2016. For the relationship between changes in the global economy and the Chinese SEZ experience, see Bach (2017).

¹²⁰ See for instance the contributions in Zeng, Douglas Zhihua, ed. *Building engines for growth and competitiveness in China: Experience with special economic zones and industrial clusters*. The World Bank, 2010).

industrial development zones (HIDZs) did not share this feature and functioned with narrower remits as instruments of industrial policy.

Unfortunately, there is still little evidence on how the relationship between urban policy and SEZ design influences overall success in stimulating economic activity. Shenzhen is certainly a classic example of urban planning contributing to industrialisation. However, it is important to remember that it was a small fishing town of barely 30,000 people before being appointed as an SEZ. This meant that it essentially offered a clean slate on which to experiment with planning efforts and might not be replicable in other SEZs across the world.¹²¹ Even in China, Shenzhen's success was not matched by that of the other comprehensive SEZs: while Shenzhen's GDP grew at an average yearly rate of 58% between 1980 and 1984, Zhuhai grew at 32%, Xiamen at 13%, and Shantou at 9% on average, as compared to an average growth rate of about 10% for China as a whole.¹²² For the period from 1980-1997, the average growth rates were 28% for Shenzhen, 18% for Zhuhai, 16% for Xiamen, and 12% of Shantou.¹²³ Although the other zones can by no means be considered failures, there is a clear shortfall in performance relative to Shenzhen in need of being explained.

While Shenzhen's GDP grew at an average yearly rate of 58% between 1980 and 1984, Zhuhai grew at 32%, Xiamen at 13%, and Shantou at 9%.

Part of this shortfall has been attributed to the fact that Zhuhai and Shantou were "historic cities with strong local customs and culture, as well as their own languages", which reduced the scope for radically innovative approaches such as those introduced in Shenzhen.¹²⁴ More generally, the institutions implanted in other SEZs failed to achieve the same strength as in Shenzhen, since they were plagued by problems such as a lack of foreign investor interest, corruption, customs irregularities, overbuilt infrastructure, and real estate bubbles, owing to poor urban and zone management, which has been attributed to a lack of social trust, among other reasons.¹²⁵ Chinese policymakers learnt from these initial shortcomings in SEZ design and when they inaugurated fourteen new ETDZs in 1984, they took measures to promote a more aggressive targeting of foreign investors, as well as to ensure that competition between ETDZs would compel authorities to optimise zone performance.¹²⁶ Overall, however, not enough is known on why some SEZs succeeded in China and others failed. Learning from the failed Chinese SEZs would also be very instructive for African policymakers.

Key lessons from the Chinese experience with relevance for African cities

Some African countries have started experimenting with the use of SEZs. However, most assessments of these SEZ programmes have been pessimistic, pointing to the low levels of investment, exports, and employment, as well as

¹²¹ Ibid (84).

¹²² Ibid.

¹²³ Knoch, Claus. "Special Economic Zones and Economic Transformation. The Case of the People's Republic of China." PhD diss., 2000, p. 154.

¹²⁴ Ibid (114: pp. 37-38).

¹²⁵ See Ibid (84) and Ibid (114).

¹²⁶ See Naughton, Barry J. *The Chinese economy: Transitions and growth*. 1st Edition MIT press, 2006, p. 409.

more systemic issues including poor design and misplaced political economy incentives.¹²⁷ Interestingly, shortcomings in urban policy and management have so far received little attention when trying to explain African SEZs' lack of success. Some recent evidence suggests that this might have been a mistake. For example, a recent quantitative study of the drivers of SEZ performance around the world finds that low-cost locations close to large cities and large markets lead to improvements in SEZ performance.¹²⁸ This is further corroborated by the recent Ethiopian experience with SEZs, currently the most ambitious in Sub-Saharan Africa, as outlined in Case Study 8. In view of these findings, learning from both the successes and challenges that China has faced in this area could be particularly instructive.¹²⁹

It should be highlighted that urban policies are only one subset of spatial policies, which can also be implemented at the regional or national levels.¹³⁰ At each of these levels, the effective integration of spatial and economic planning plays a key role in shaping patterns of urbanisation and industrialisation. The same applies to infrastructure provision, which is crucial for enhancing an economy's international competitiveness.¹³¹ In many African countries, however, these policy areas usually fall under the remit of different authorities and are therefore not tackled concurrently.¹³² Addressing this problem requires the input and coordination of activities across a variety of national government bodies, such as ministries of transport, trade, planning and others. Given the comprehensive nature of the Chinese planning process, exploring China's experience could also be instructive for aligning the incentives of these different

¹²⁷ See Farole, Thomas. *Special economic zones in Africa: comparing performance and learning from global experiences*. The World Bank, 2011; and Farole, T., and Lotta Moberg. "Special Economic Zones in Africa, Political Economy Challenges and Solutions." Page, John and Finn Tarp. *The Practice of Industrial Policy: Government-Business Coordination in Africa and East Asia* (2017): 234-54.

¹²⁸ Frick, Susanne A., Andrés Rodríguez-Pose, and Michael D. Wong. "Toward Economically Dynamic Special Economic Zones in Emerging Countries." *Economic Geography* 95, no. 1 (2019): 30-64.

¹²⁹ For instance, when designing its industrial parks, the Ethiopian government commissioned a study on industrial park development, which focused mainly on China, but also looked at the experiences of Korea, Mauritius, Malaysia, and countries in the Middle East and North Africa. See Weldesilassie, Alebel Bayrau, Mulu Gebreeyesus, Girum Abebe, and Berihu Aseffa, "Study on Industrial Park Development: Issues, Practices and Lessons for Ethiopia". *Ethiopian Development Research Institute Research Report* 29 (2017).. Few other African government have been equally methodical in drawing lessons from Asian countries' experiences, but these have nonetheless served as inspiration. For the case of Kenya, see Fourie, Elsje. "Model students: Policy emulation, modernization, and Kenya's Vision 2030." *African Affairs* 113, no. 453 (2014): 540-562.

¹³⁰ Ibid (108).

¹³¹ See, for example, the discussion on China's central-government sponsored macro-regional development plans in Heilmann, Sebastian, and Oliver Melton. "The reinvention of development planning in China, 1993-2012." *Modern China* 39, no. 6 (2013): 580-628.

¹³² See, for example, the case studies of SEZ development in Tanzania in Whitfield, Lindsay, Ole Therkildsen, Lars Buur, and Anne Mette Kjær. *The politics of African industrial policy: A comparative perspective*. Cambridge University Press, 2015, pp. 220-231. See also Farole (2011); and Zeng, Douglas Zhihua. *Global experiences with special economic zones: focus on China and Africa*. The World Bank, 2015.

actors. More generally, it can shed light on the most appropriate institutional formulas for harnessing the potential contribution of local government to efficient urbanisation and industrialisation.

CASE STUDY 8: URBAN POLICY AND HAWASSA INDUSTRIAL PARK, ETHIOPIA

Hawassa Industrial Park (HIP), an SEZ, located in Ethiopia's Southern Nations, Nationalities and Peoples' Republic (SNNPR) is the flagship project in a series of industrial parks built by the Ethiopian government. The aim is to create employment for its growing population and to address the country's chronic lack of foreign exchange. The park has been able to successfully increase its employment to 30,000 workers, on the back of the successful attraction of foreign investors, including American apparel firm called PVH.¹³³

Hawassa Industrial Park has successfully employed 30,000 workers and has attracted various foreign investors, including American apparel firm called PVH.

Entrance to Hawassa Industrial Park



Source: Wikipedia

However, it has been beset by a few problems that threaten its long-term viability, mostly related to worker dissatisfaction with the wage levels, which vary between ETB 600-1200 (equivalent to roughly \$20-\$40 per month). The limited purchasing power of these wages appears to be linked in part to poorly functioning urban policies. For example, many workers migrating from rural areas to Hawassa are confronted with a scarcity of affordable housing. This stems from a limited availability of land for development, partly due to the high costs and complexities of expropriating surrounding agricultural land; an unfavourable geography; and high costs of financing and construction. These difficulties are compounded by the local government's lack of financial resources and capacity, which reduces the feasibility of solutions such as subsidised housing or dormitories.¹³⁴

¹³³ Ibid (121: Schmidt et al. (2018))

¹³⁴ Grant, E., Desta, G., Admassie, Y., & Stevens, S.. Shelter issues and solutions in Hawassa. London: International Institute for Environment and Development. (2019)

One of the consequences of the housing problem has been an increase in urban sprawl. Workers in HIP are having to resort to informal housing in peripheral parts of the city. Yet the lack of adequate transportation to take these workers to the park means that employers have to arrange transportation, which poses an additional cost to firms. These relatively high rent and transport prices observed in Hawassa impinge on the real wage of workers, in turn affecting the cost competitiveness of HIP as an investment location. Furthermore, in spite of its ambitious targets, HIP is yet to bring an influx of workers of comparable scale to those observed in Shenzhen and other Chinese SEZs. This has meant that the basic structure of the pre-existing urban area has mostly been preserved, so that authorities have had to contend with area's pre-existing institutions and history of political and ethnic conflicts. As a result, they have not had free reign to radically restructure the urban environment to the same extent as observed in many Chinese SEZs.¹³⁵ Dealing with the twin challenges of urbanisation and industrialisation in Hawassa is still a challenge, and further research is needed in order to devise suitable policy and institutional solutions.

Conclusion

This paper has traced the origins of Africa and China's urbanisation stories and contextualised the similarities and differences between these two regions. It's first important to note that the underpinning of the two regions' urban transitions were vastly different. Although both have been in the context of rising urban incomes, structural transformation in China meant that there was the opportunity to shift from agriculture towards higher-productivity jobs in secondary and tertiary sectors in cities. African cities on the other hand, have been largely characterised by increasing consumption of non-tradable and small-scale services, which are not as productivity-enhancing job sectors.

Within these development patterns seen, four major themes emerge. The first theme pertains to the importance of planning urbanisation ahead of settlement: as African urbanisation was not coupled with the draw of manufacturing and service sectors in cities, it has been by its nature unexpected and unplanned. Governments have not yet harnessed urban land to support growth and this has been compounded by complexities surrounding many urban African land institutions. For example, the lack of clarity over who owns what land and under what legal basis in many African cities has dampened the vibrancy of real estate markets as well as the government's capacity to manage how urbanisation takes place. This couples with the second theme relating to low investment in infrastructure. Governments have not had the capacity to invest

¹³⁵ See, for example, Mains, Daniel, and Eshetayehu Kinfu. "Making the city of nations and nationalities: the politics of ethnicity and roads in Hawassa, Ethiopia." *The Journal of Modern African Studies* 54, no. 4 (2016): 645-669.

in the fundamental infrastructure and services which support urban growth, leading to costly and protracted challenges when trying to renew and rejuvenate areas of settlement that had previously seen limited investment.

Such systems are often predicated on the strength of local government, the third theme, and in particular their ability to manage urbanisation through raising funds to invest in infrastructure and deliver services. Effective decentralisation has not yet been completed in many African countries. Furthermore, limitations in capacity tend to further exacerbate the challenges. This is often further limited by a lack of investment, coordination and provision of responsibility on imparted from the national government.

All of these factors have contributed to a trend in African cities, exemplified by the fourth theme, of urbanisation taking place unaccompanied by industrialisation and structural transformation. Firms need access to quality infrastructure and labour, as well as, a supportive institutional environment, in order to be productive. The relative performance of SEZs in Africa versus China is an interesting manifestation of how these differences in urban infrastructure and institutional capacities translate to the ability for firms to operate effectively.

These themes are key to understanding how the link between urbanisation and industrialisation was formed during China's period of economic reform. However, we recognise that there are major differences between African countries and China which may limit the applicability of the Chinese experience. While many look to Chinese cities and see the successes, urbanisation has not come without its failures, including environmental degradation, the limits of land-based financing, and increasing worries about the collapse of the housing market, among others.

By exploring these key themes in further research and through comparing and contrasting the urbanisation stories of China and Africa, we may come closer to finding adaptable approaches with the potential to improve outcomes in urban Africa. This will require understanding where African cities can adapt and build on China's successes, whilst proactively trying to avoid and mitigate its challenges. Further work in this area could also highlight areas where China may want to learn from African cities; one such area illustrated in this paper is in the implementation of a property tax system.

FURTHER READING

Collier, Paul. “African Urbanisation: An Analytical Policy Guide.” *Policy paper*, International Growth Centre, London (2016).

Hu, Angang. *China in 2020: A new type of superpower*. Brookings Institution Press, 2011.

Yang, Li. “China’s Growth Miracle: Past, Present, and Future.” *United Nation Research Institute for Social Development* 7 (2013).

You-Tien, H., 2010. *The great urban transformation: Politics of land and property in China*. Cary, NC: Oxford University Press.

ACKNOWLEDGEMENTS

This project forms part of a joint research partnership between the International Growth Centre, the Blavatnik School of Government at Oxford University, and the Centre for International Knowledge on Development in China. We gratefully acknowledge the support of the UK Department for International Development China office in funding this project. We also acknowledge Weiping Wu, Zhi Liu, Paul Collier, Tony Venables and Priya Manwaring for their excellent reviews and helpful comments on this work.

Please cite the contents of this document as follows: Dercon, S., Haas, A., Kriticos, S., and Lippolis, N. (2019) “Where Africa could learn from the Chinese urbanisation story” IGC Cities that Work Policy Framing Paper.

Cover photo: Beijing, China by DuKai photographer